biology "» and, as an attempt at explanation " the system theory of the organism ' V And the fundamental fact and process to be explained by the system-theory is organization. For : * The chief contrast between living and dead only conies to light when we no longer consider the single processes but the totality of all processes within an organism or within a relatively independent partial system of one. "We then find that these processes do not proceed arbitrarily and independently, but are organized and harmonized in a definite way. This organization of the processes is the clearest, and indeed the only decisive distinguishing feature between the vital happenings and the ordinary physico-chemical processes/ But no such explanatory theory of the vital processes has yet been suggested ; therefore : * The question whether physical concepts *at present* suffice for scientific biology must be answered in the negative, because neurology, experimental embryology, and genetics . . . employ purely biological concepts. To the question whether these concepts will be replaced by physical ones in the future, we must answer : wait and see/

I suggest that Bertalanffy and the other organicists whom we have mentioned are in a position similar to that of an engineer who should protest against a machine being regarded as an aggregation of its material parts and explicable in terms of physics and chemistry; insisting that the machine is a whole, each part of which can be understood only in terms of its relations to and its functions in the whole machine; while stoutly denying

that the working of the machine involves the co-operation of any teleological or psychical factors.

Bertalanffy proceeds to examine various attempts at explanatory theories, especially Goldschmidt's chemical